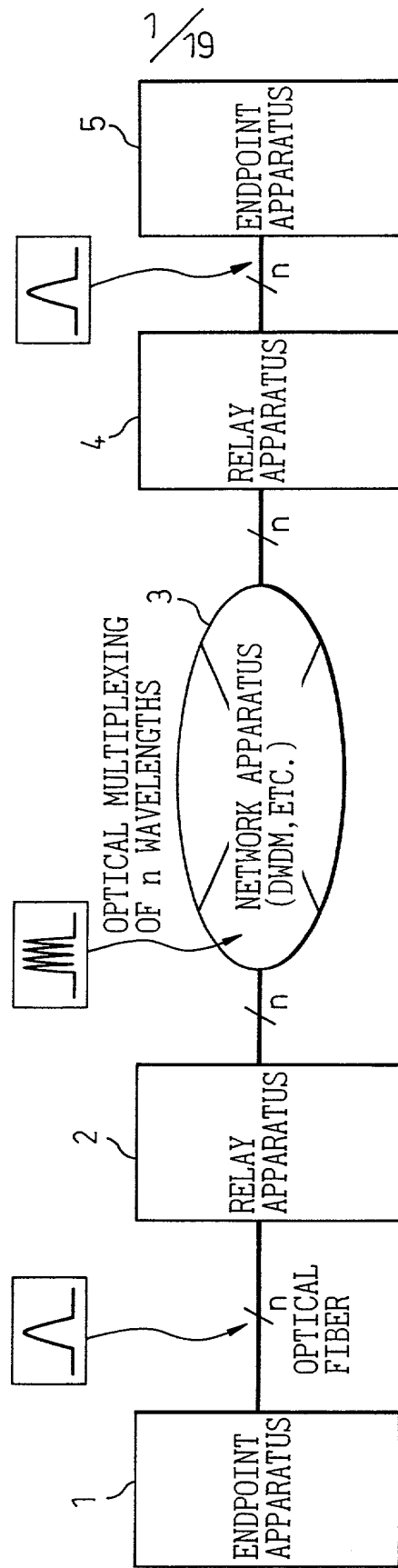


Fig.1



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MENTIONED HEREIN. IT IS THE PROPERTY OF THE
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Fig. 3

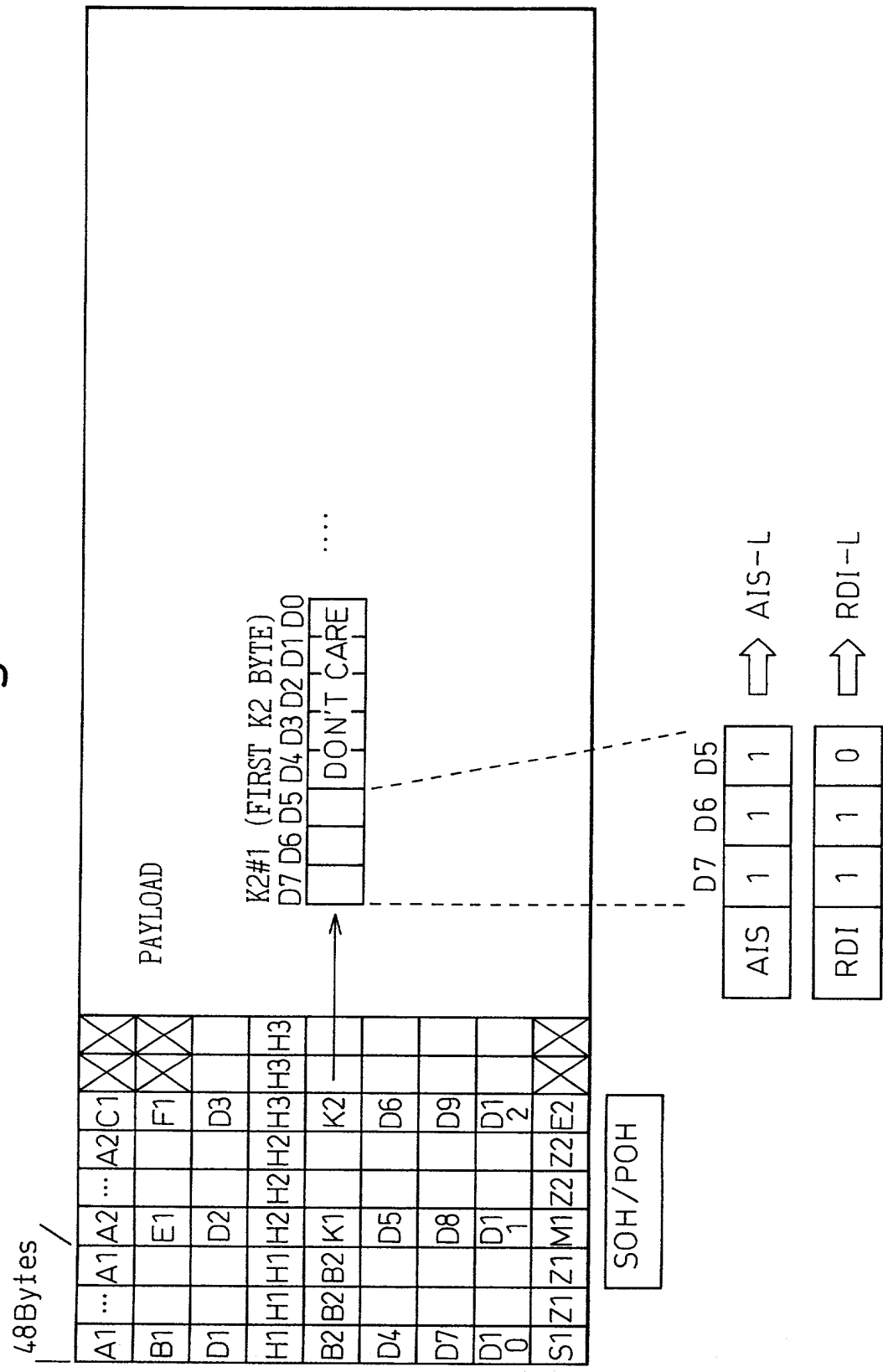


Fig. 4

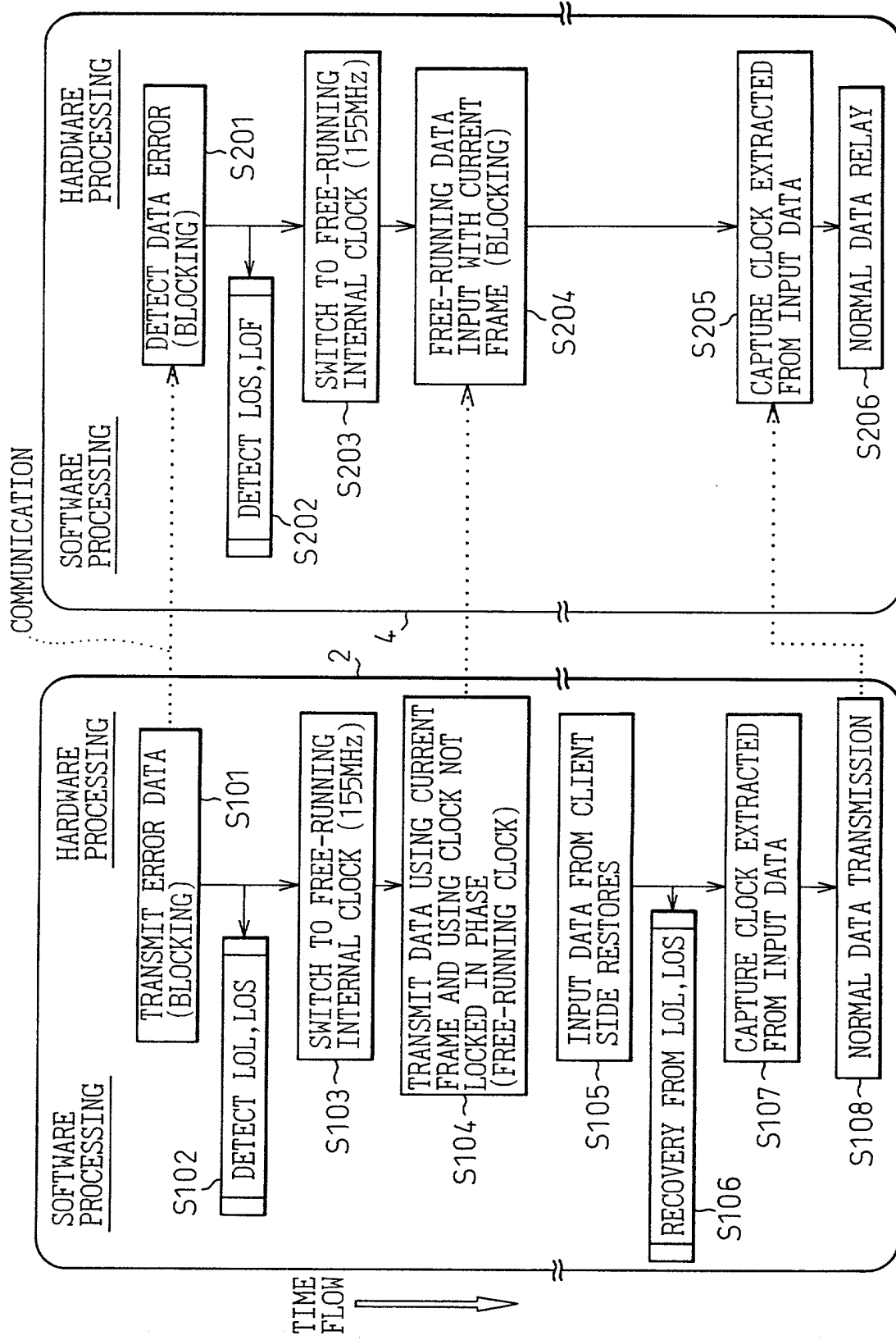


Fig. 5

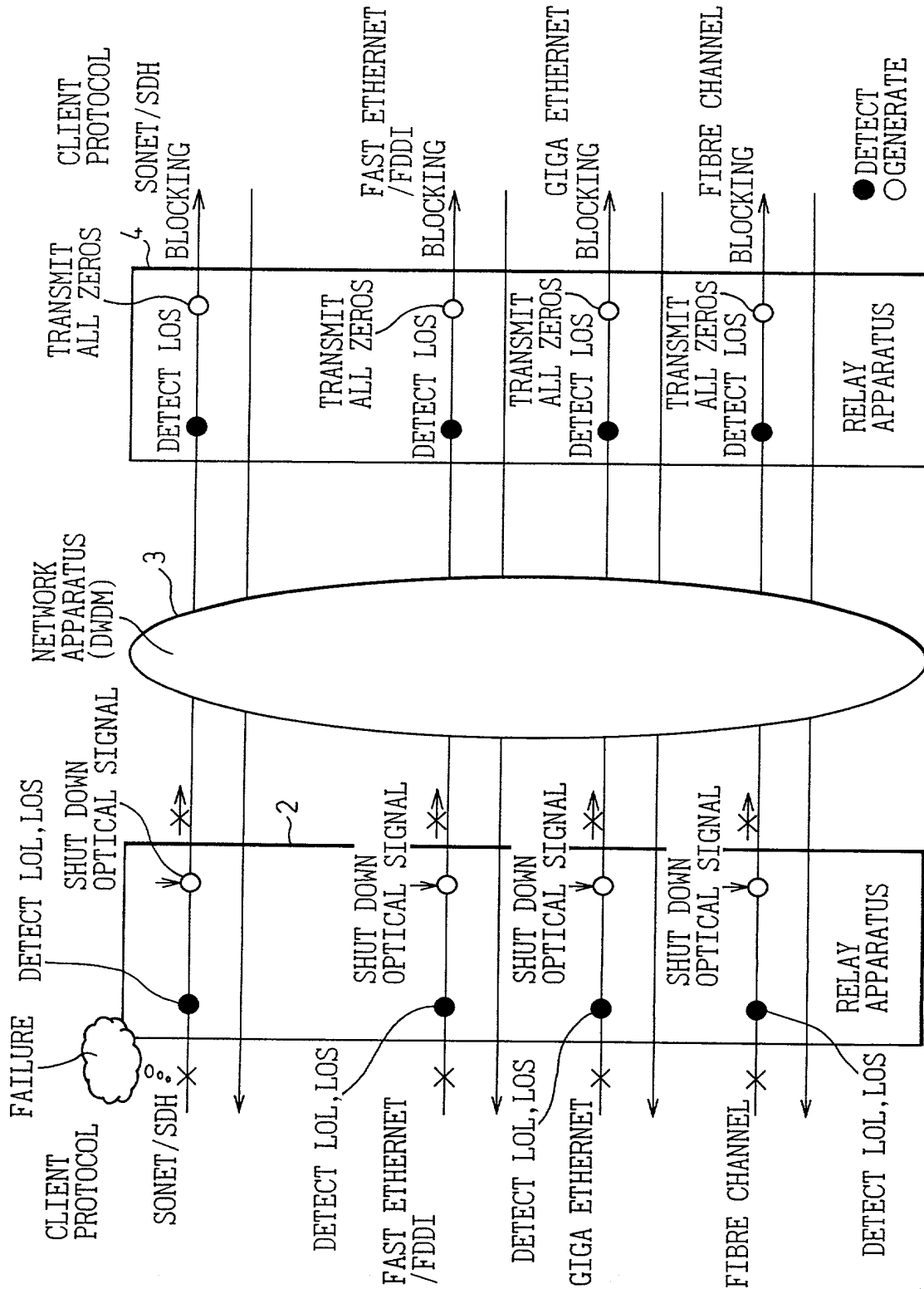


Fig.6

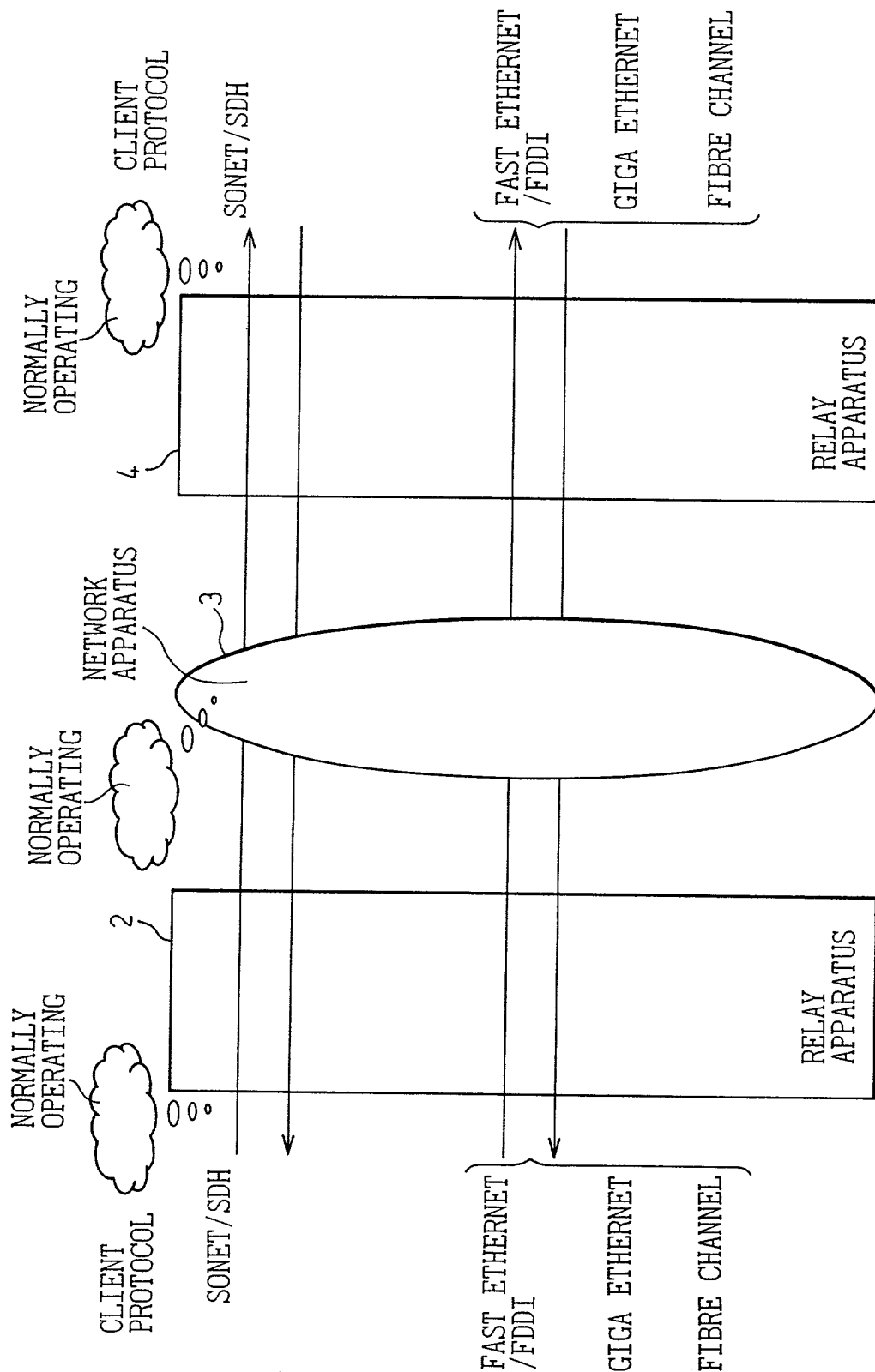


Fig. 7

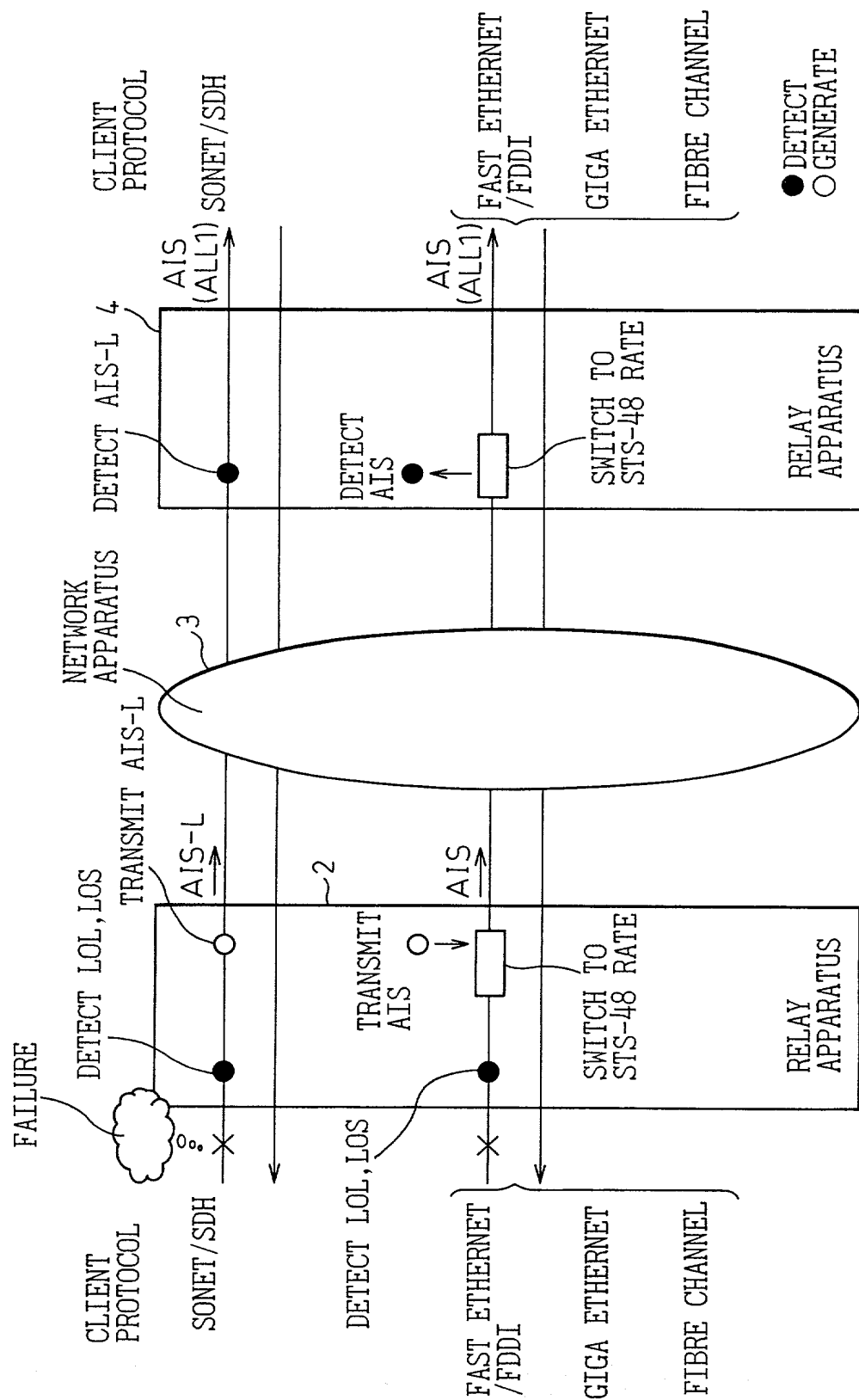
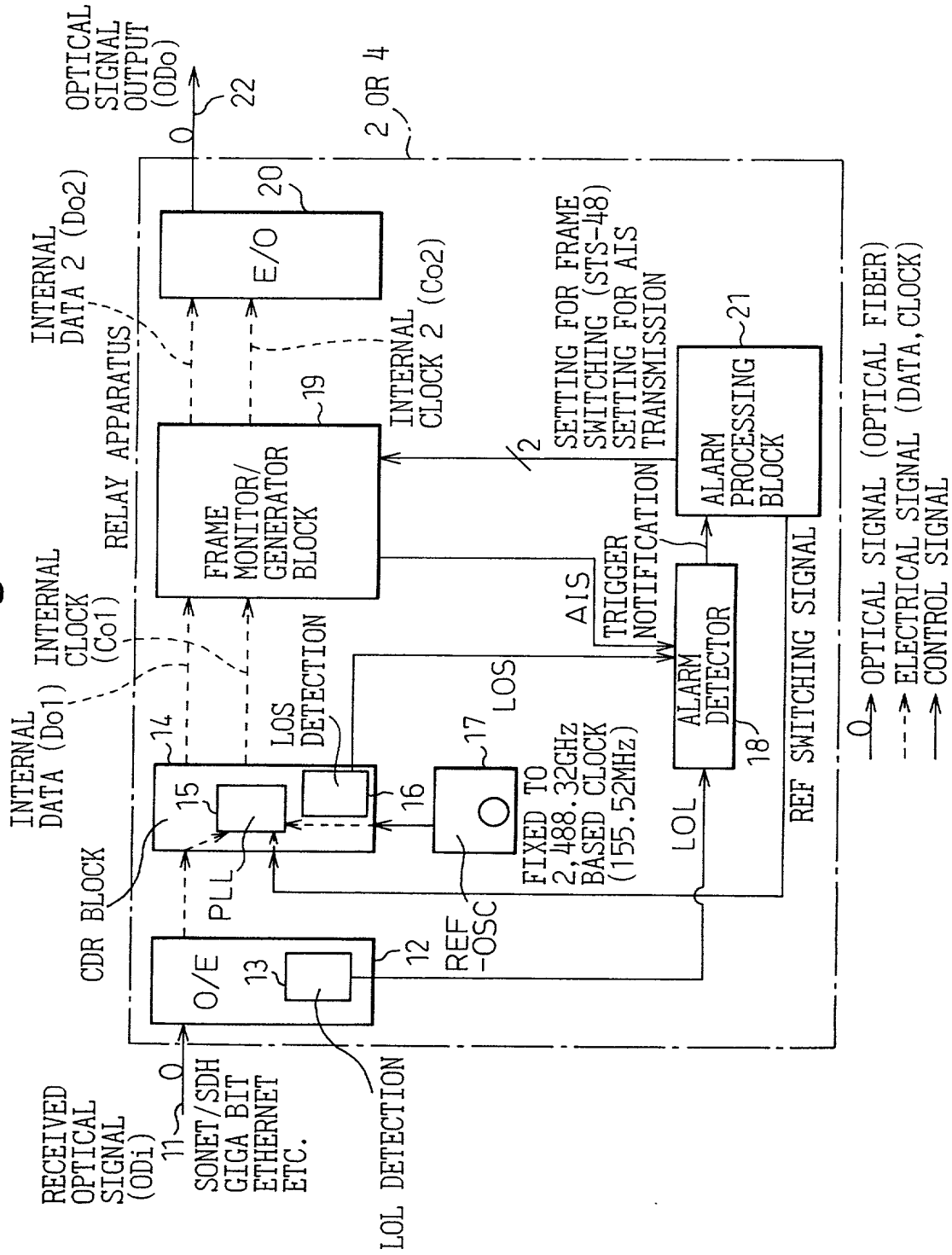
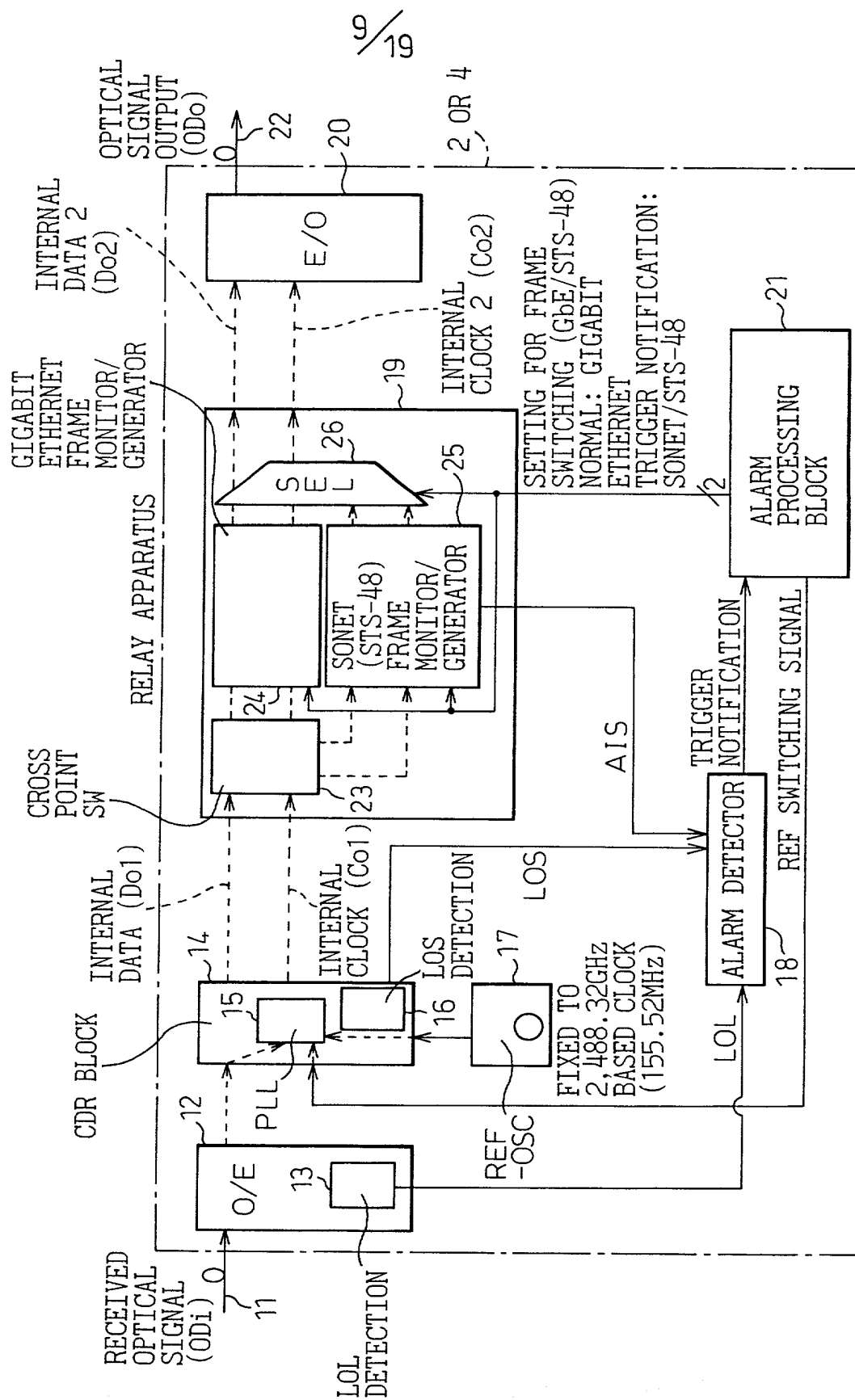
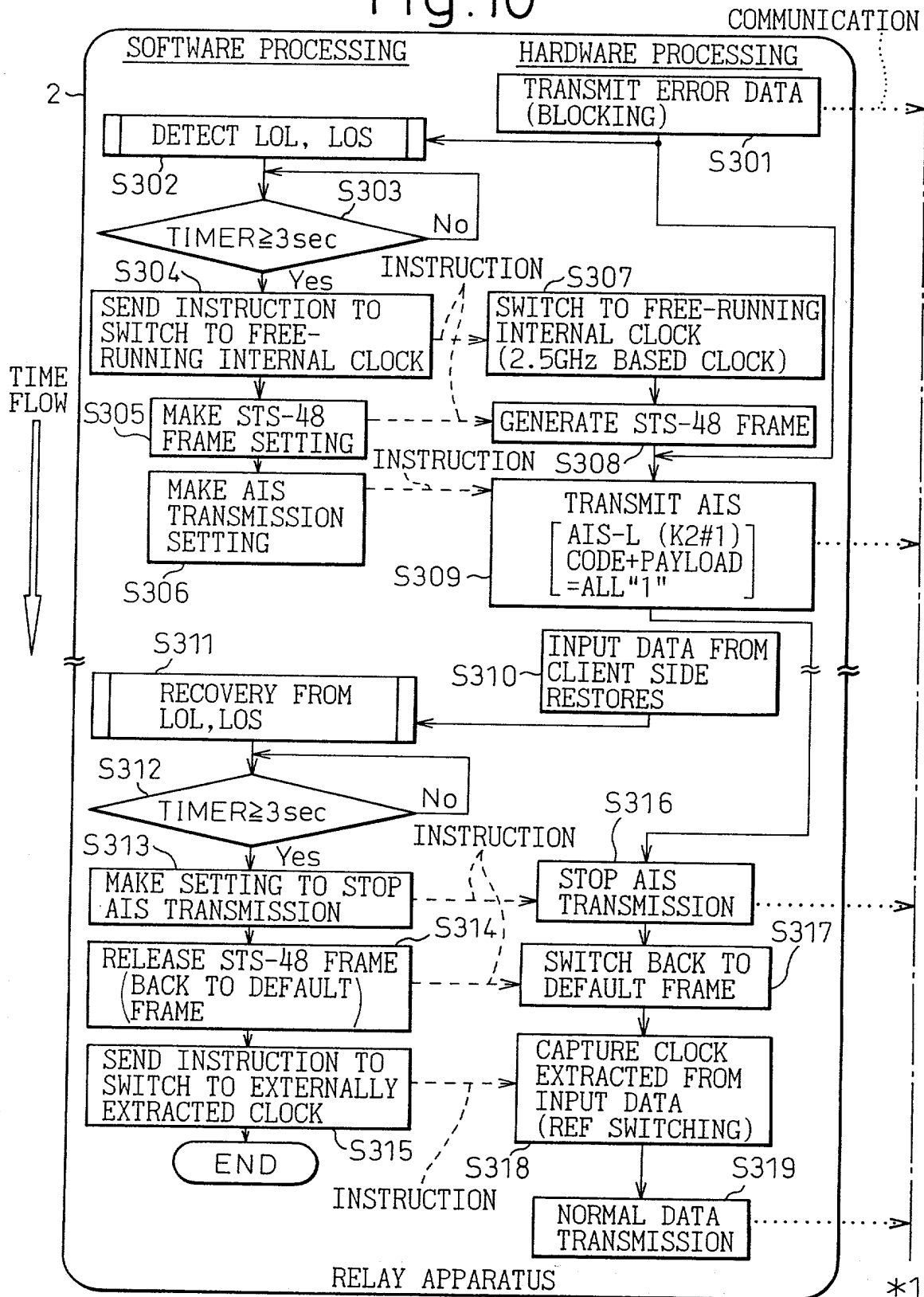


Fig. 8



[illegible]

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Fig.10



SOFTWARE PROCESSING

DETECT DATA ERROR
(BLOCKING)

S401

DETECT LOS, LOF

540

S403

TIMER ≥ 3 sec

No

S404

Yes

SEND INSTRUCTION TO
SWITCH TO FREE-RUNNING
INTERNAL CLOCK

INSTRUCTION

S406

SWITCH TO FREE-RUNNING
INTERNAL CLOCK
(2.5GHz BASED CLOCK)

MAKE STS-48
FRAME SETTING

S405

INSTRUCTION

S407

GENERATE STS-48 FRAME

RECEIVE AIS

S408

DETECT AIS

S409

S413

AIS STOPS

S470-

AIS STOPS

S411

RELEASING OF STS-48 FRAME
(BACK TO DEFAULT FRAME)

SWITCH BACK TO
DEFAULT FRAME

S414

INSTRUCTION

INSTRUCTION TO
SWITCH TO EXTERNALLY
EXTRACTED CLOCK

INSTRUCTION

S 415

CAPTURE CLOCK EXTRACTED
FROM INPUT DATA
(REF SWITCHING)

END

5412

S416

NORMAL DATA RELAY

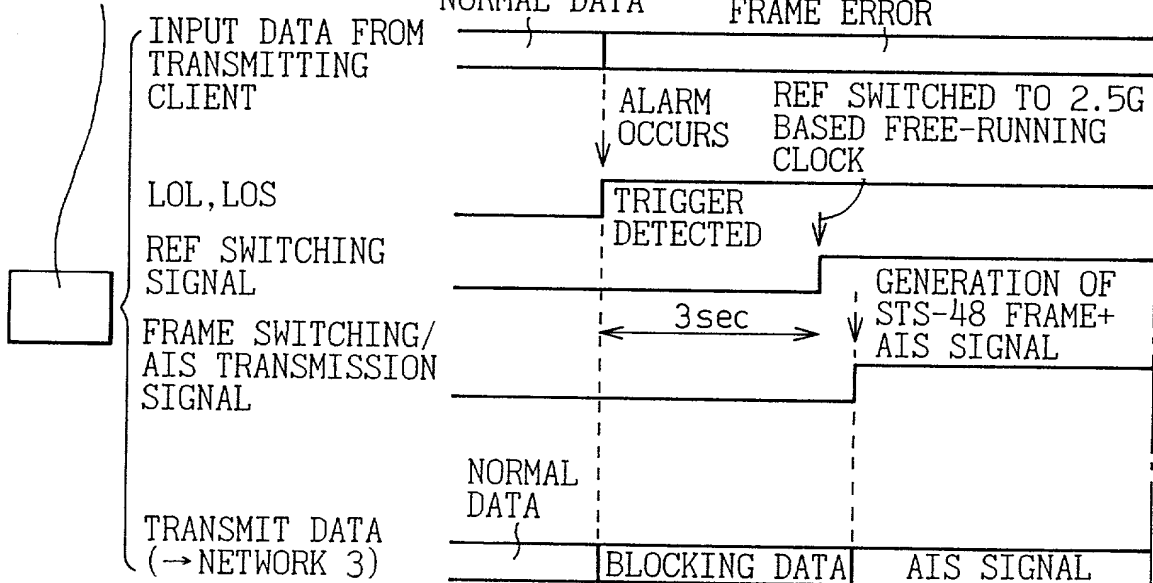
RELAY APPARATUS

*1

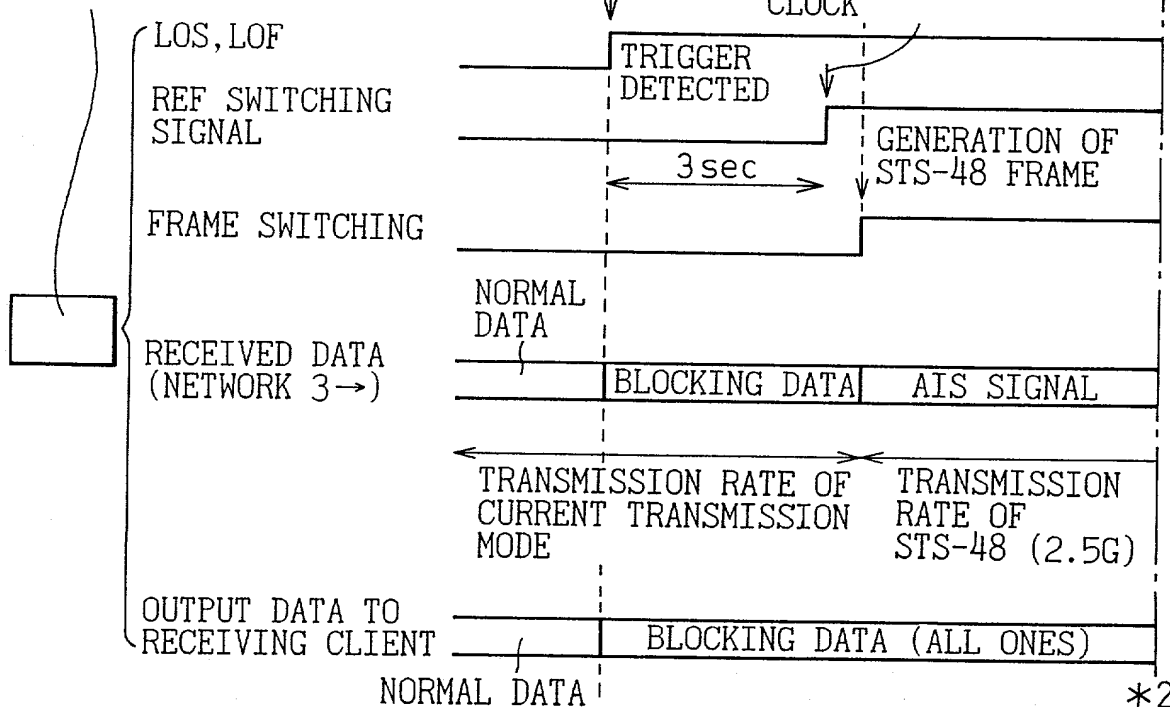
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Fig.12

RELAY
APPARATUS 2



RELAY
APPARATUS 4

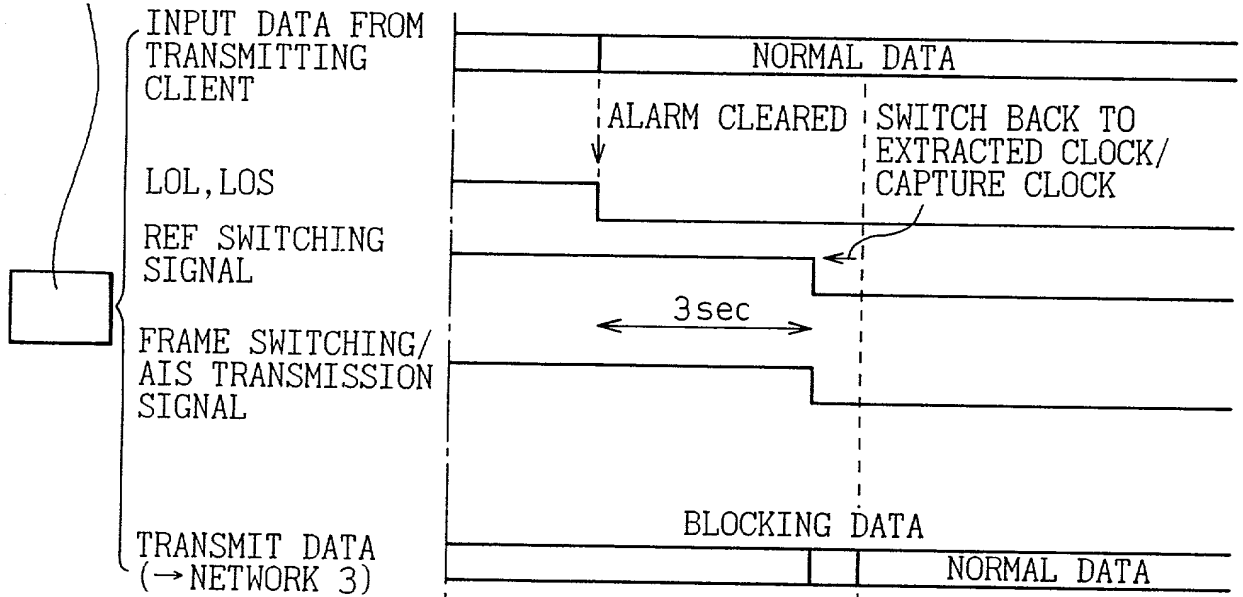


*2

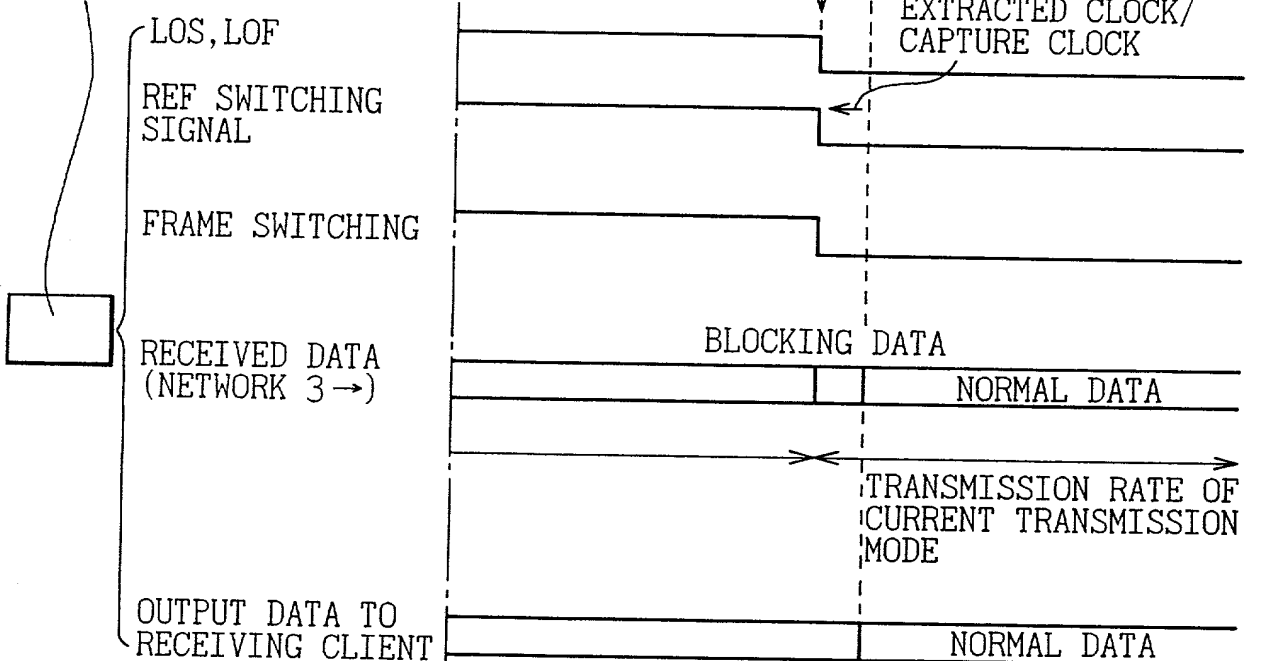
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Fig.13

RELAY APPARATUS 2



RELAY APPARATUS 4



*2

FIG. 15 is a block diagram of a system for detecting and generating AIS-L signals in a SONET/SDH network. The system includes a client protocol, a SONET/SDH network, and a wavelength switching apparatus. The client protocol is connected to the SONET/SDH network via a failure detector. The SONET/SDH network is connected to the wavelength switching apparatus via a SONET/STS-48 (2.488Gbps) fixed frame. The wavelength switching apparatus is connected to the client protocol via a SONET/STS-48 (2.488Gbps) fixed frame. The system also includes a SONET/SDH network, a wavelength switching apparatus, and a SONET/STS-48 (2.488Gbps) fixed frame.

Fig.15

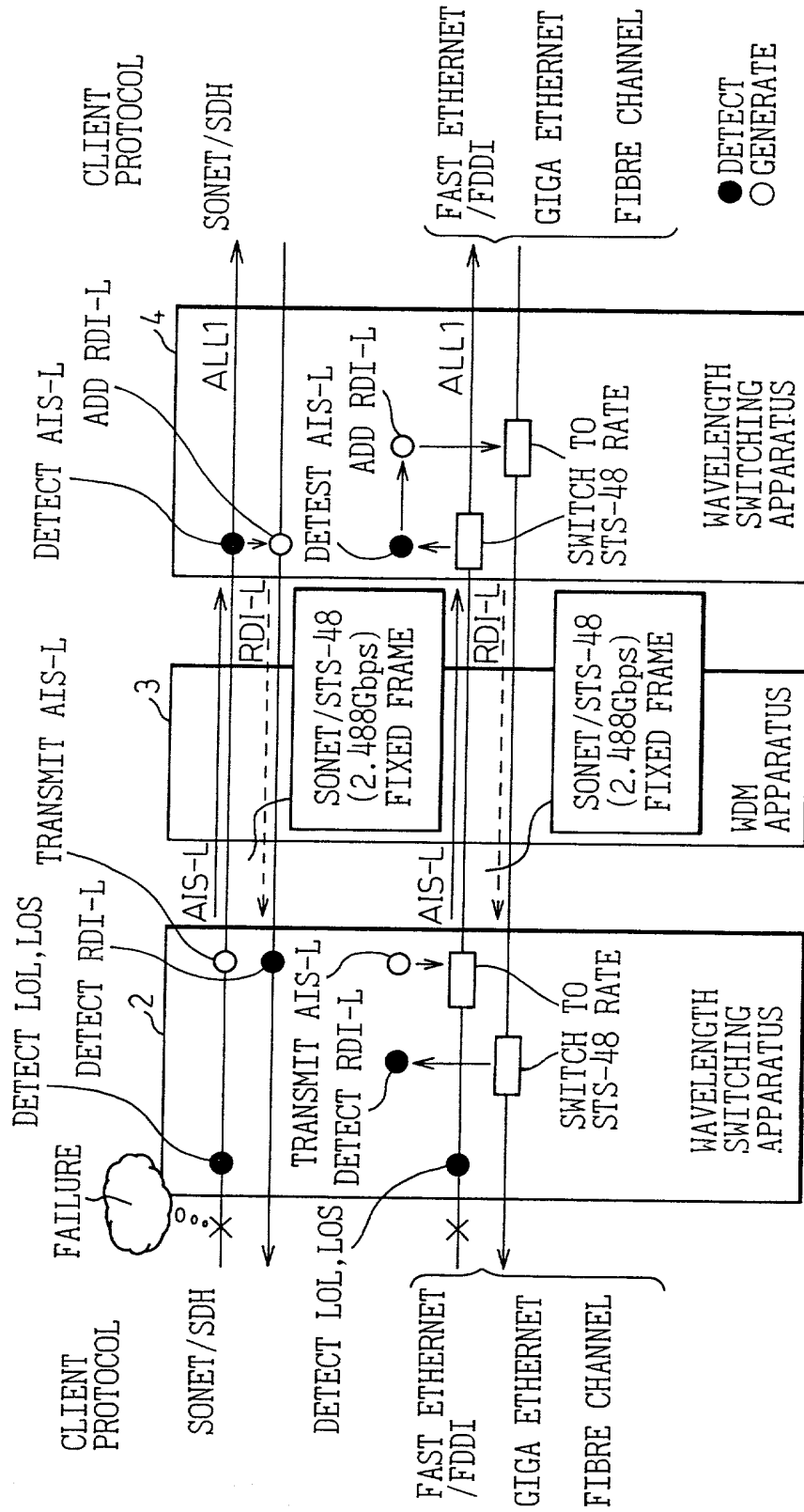
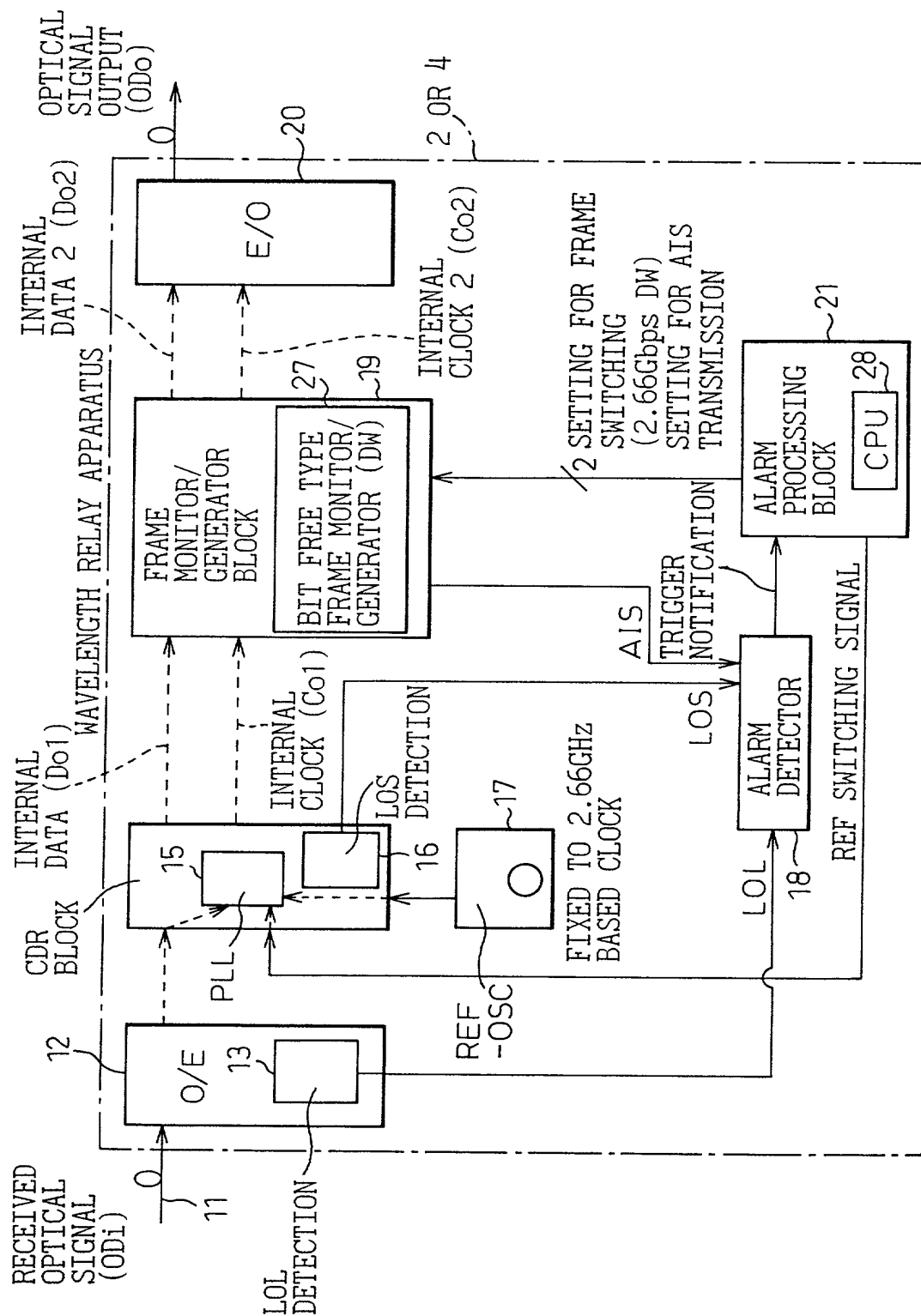


Fig. 16



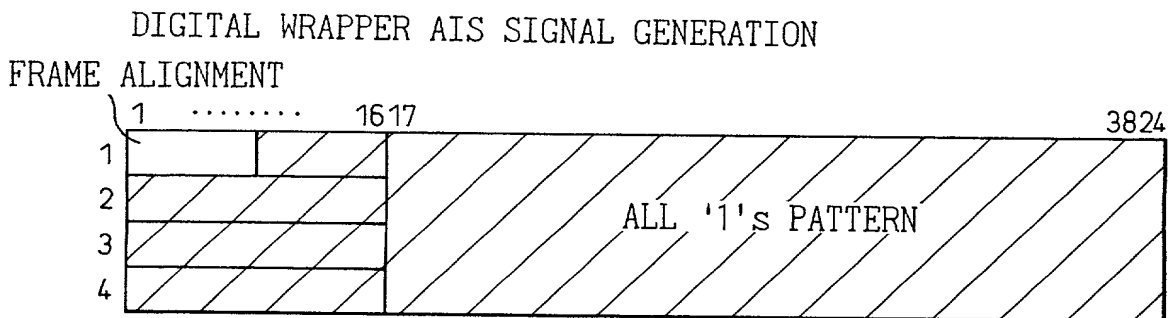
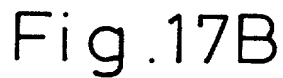


Fig.17C

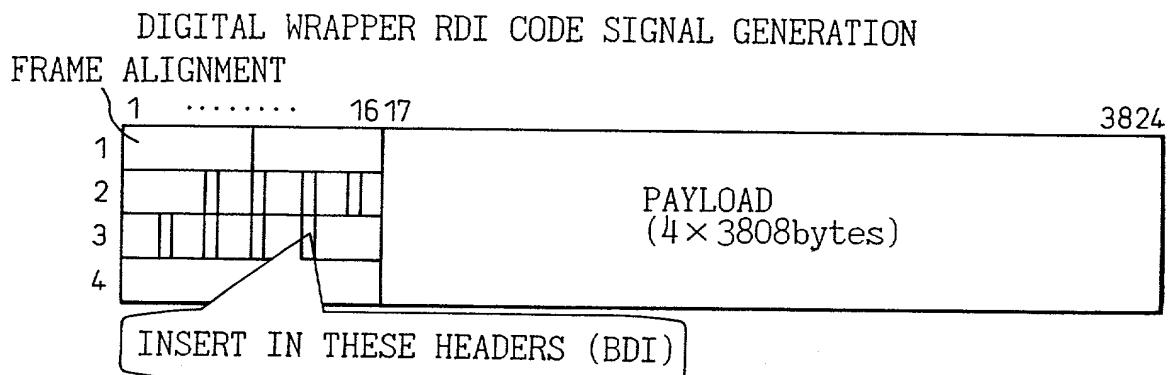


Fig.19

